Endothelin receptor emerges as a potential target of Hoxa9-mediated leukemogenesis.

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Authors: Eric Gars, Satinder Kaur, Daniel Thomas

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Public Summary:

Endothelin receptor type A is a class A G-protein coupled receptor that binds with high affinity to the endothelin family of peptides, endothelin-1 (ET-1) and endothelin-2 (ET-2). EDNRA is predominantly expressed by smooth muscle cells in the medial layer associated with blood vessels throughout the body and also in cardiomyocytes. Arabanian et al from the Palmqvist laboratory, University of Gothenburg, Sweden reveal that ETA or ENDRA is expressed in AML blasts that may shed light regarding the vascular leukemic niche. Over expression of EDNRA in Hoxa9 derived leukemia resulted in accelerated disease progression and shortened survival compared Hoxa9 alone. It was observed that leukemia blasts express ENDRA under regulatory control of the homeobox transcription factor Meis-1 increased EDNRA signaling in leukemia blasts can promote leukemia growth, proliferation and decreased apoptosis.

Scientific Abstract: